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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,035	02/17/2005	Grant Berent Jacobsen	01435.0209-00000	3499
22852	7590	06/11/2007		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER LEE, RIP A	
			ART UNIT 1713	PAPER NUMBER
			MAIL DATE 06/11/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/525,035

Applicant(s)

JACOBSEN ET AL.

Examiner

Rip A. Lee

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 7 and 9-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 7, 11, 12 and 14-18 is/are rejected.
- 7) ☒ Claim(s) 2-4, 9, 10, and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

This office action follows a response filed on March 14, 2007. Claims 1-4, 6, 7, and 9-18 remain pending.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 6, 7, 11, 12, and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hokkanen *et al.* (U.S. 5,767,032).

Hokkanen *et al.* discloses a process for preparing supported metallocene catalysts comprising vaporizing a metallocene compound and treating a solid inorganic support with the vaporized metallocene, and optionally, treating the supported metallocene with an activating agent selected from the group consisting of organic aluminum compounds, ionic compounds, and olefin monomer with or without an organic aluminum compound present (claim 1). As explained by the inventors, it is possible to use olefin monomer such as ethylene and propylene as the activating agent. In such instances, the monomer and the carrier containing metallocene are brought into contact by introducing gaseous monomer into the same reaction space where the support was treated with metallocene (col. 7, lines 65-67, col. 8, lines 13-16). This particular embodiment of the invention allows for formation of a prepolymerized catalyst which can be used for polymerization without there being any need for adding further co-catalyst into the reactor (col. 8, lines 1-4).

The specification does not show a specific example of the embodiment described in the text. However, one having ordinary skill in the art would recognize that the metallocene/support/olefin monomer combination is inert in absence of an organoaluminum co-activator. Note that Hokkanen *et al.* teaches, "where polymerizable monomer is used as the activating agent, organoaluminum compounds (co-catalyst) can be present during the prepolymerization step (col. 8, lines 4-7)." Since there is no need for further co-catalyst to be

added to the reactor, it would have been obvious to one having ordinary skill in the art to add an organoaluminum compound directly onto the supported system in order to initiate pre-polymerization thereon, thereby arriving at the steps outline in instant claim 1.

The subject matter of the remaining claims is also obvious over Hokkanen *et al.* Silica may be pretreated with with organometallics (col. 6, lines 1-10). Use of aluminoxane as the organic aluminum compound (co-activator) is taught in col. 7, lines 23, as is use of ionic compounds (col. 7, lines 40-50). Catalysts of the invention are useful for polymerization of a variety of α -olefins and dienes (col. 8, lines 36-40), and they are amenable to both slurry and gas phase processes (col. 8, lines 55-67).

3. Claims 2-4, 9, 10, and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The subject matter of the instant claims is not disclosed or fairly suggested in the prior art, and one having ordinary skill in the art would not have sufficient motivation to modify the invention of Hokkanen *et al.* in order to arrive at the subject matter of these claims. Since the patent teaches treatment of silica support with metallocene in the vapor state, one would not be motivated to add co-catalyst and polymerizable monomer to the support prior to addition of metallocene.

Response to Arguments

4. Applicant's arguments with respect to the rejection of claims over Andell *et al.* (U.S. 6,225,423) have been considered fully, and are persuasive. Although the presence of aluminum compound (c) in the support treatment step (I) is optional, said aluminum compound must be present in order for polymerization to occur. Claims and the text proceed to indicate unambiguously that the organic aluminum compound is combined with the transition metal compound and the contact product thereof is added to the support. Such a step would not adhere to the process outlined in the instant claims. As such, the rejection has been withdrawn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

A handwritten signature in black ink, appearing to be "Rip A. Lee", with a stylized, cursive script. The signature is written over a small, faint rectangular stamp that contains the letters "ral".

June 6, 2007